# A SYNOPSIS OF THE ASIAN SPECIES OF DELPHINIUM, SENSU STRICTO\*

## PHILIP A. MUNZ

### GROUP X

Leaves rather coarsely lobed as in Groups VIII and IX, but the spurs strongly curved to make about a half circle.

This group, also, is an artificial one and does not agree with any taxonomic subdivision proposed for the genus.

### KEY TO SPECIES

- 1. Sepals with subapical cornute appendages 1-2 mm. long; flowers purplish blue.
  - 2. The sepals 18-20 mm. long; spur 20-22 mm. long. (These two species treated in Group VIII).

- 3. Ultimate leaf-lobules 2-4 mm. wide. Tibet. 145. D. ceratophoroides.
- 1. Sepals lacking subapical cornute appendages.
  - 4. Stem and axis of inflorescence largely glabrous.
    - 5. Sepals 10-11 mm. long.

      - 6. Inflorescence a diffuse panicle; pedicels 1.5-3 cm. long. Yunnan, etc. 239. D. polyanthum.
    - 5. Sepals 15-25 mm. long.
      - 7. Bracteoles 7-15 mm. long. Yunnan. ..... 237. D. eriostylum.
      - 7. Bracteoles shorter, 2-7 mm. long. Szechwan.

        - 8. Petals bluish; sepals more loosely pubescent, 13–17 mm. long. 244. D. tongolense.
  - 4. Stem and/or axis of inflorescence more or less hairy or pubescent.
    - 9. Sepals 18 mm. or more long.
- \* Continued from volume 49, p. 166. With this section of the paper the long series of studies by Philip A. Munz on the genera *Delphinium* and *Consolida* is completed. The series was initiated in volume 48 of this Journal and includes: A synopsis of African species of *Delphinium* and *Consolida* 48: 30-55. 1967; A synopsis of the Asian species of *Consolida* (Ranunculaceae), *ibid*. 159-202; and the first two portions of the present paper, *ibid*. 249-302, 476-545, which is continued in the first number of the present volume, 49: 73-166. *Ed*.

10. Sepals more or less pubescent; spur 20-25 mm. long. China. ... 243. D. spirocentrum.

9. Sepals shorter.

11. Leaf divisions not long-acuminate.

12. Upper petal bidentate at apex; upper sepal largely 15-18 mm. long.

13. Inflorescence racemose; leaves with coarse teeth; bracteoles near the flower. ...... 235. D. bulleyanum.

13. Inflorescence paniculate; leaves with fine teeth; bracteoles near middle of pedicel. . . . . . 244. D. tongolense.

12. Upper petal entire to somewhat erose at apex.

14. Lamina of lower petal not divided.

15. Limb of the lower petal oblong, 5 mm. wide. Szechwan. (Treated in Group VIII).

14. Lamina of lower petal divided.

16. Upper sepal 20-25 mm. long, the spur 16-18 mm. long. Altai. (Treated in Group IX).

16. Upper sepal shorter.

17. Sepals with appressed hairs, spur almost twice as long as blade. Yunnan. 238. D. hamatum.

17. Sepals with spreading hairs. Szechwan. 242. D. sino-vitifolium.

235. Delphinium bulleyanum G. Forrest ex Diels, Notes Bot. Gard. Edinb. 5: 265. 1912. Fig. 19, A.

Delphinium spirocentrum Hand.-Mazz. var. pauciflorum Chen, Bull. Fan Mem. Inst. Biol. (n.s.) 1: 170. 1943. Based on Yü 15544, (BM), taken on the east flank of the Lichiang Range, Yunnan, 2800 m.; seen.

Perennial from a woody root, the stem 3–14 dm. tall, glabrous below, spreading pubescent and more or less glandular in the inflorescence, often subglaucous and somewhat violet, simple at least below; leaves well distributed, but gradually reduced up the stem, the lower petioles to 2 dm. long, glabrous, slightly dilated at the base, the uppermost leaves becoming foliose bracts; blades rounded-pentagonal in outline, 3–10 cm. broad, glabrous to scattered strigulose on both surfaces, pale beneath, 5-fid into subcuneate incised-serrate triangular-ovate segments; inflorescence rather laxly racemose; upper bracts setose to lanceolate, lower foliose and divided; pedicels strict, 1–10 cm. long, pubescent; bracteoles setose to wider, usually 5–10 mm. long, located near the flower; sepals rich purple to deep blue-lavender, pubescent without; upper sepal 10–20 mm. long, 8–12 mm. wide, ovate, obtuse to acute, the spur 18–22 mm. long, 4 mm. wide at base, rather narrow at tip, recurved at the middle to make an almost complete

circle; lateral sepals oblong, rounded at apex, 12–15 mm. long, 7–9 mm. wide, glabrous except on the midveins; lower sepals 12–18 mm. long, 8–10 mm. wide, acuminately obtuse, pubescent; petals bluish, the upper laminae slightly oblique, glabrous, 9–11 mm. long, cleft for 1 or 2 mm., the spur 18–20 mm. long; lower laminae oblong, 5 mm. long, cleft halfway into 2 lance-oblong ciliate lobes, bearded at base, claw 4.5–5 mm. long; stamens 6–7 mm. long, glabrous; anthers oblong, dark, 1.3 mm. long; follicles 3 (–4), somewhat divergent toward apex, sparsely pilose, 10–12 mm. long, the styles an additional 3 mm. long; seeds dark, 1 mm. long, obpyramidal, covered with minute scales.

Type: Moist rocky places among scrub on eastern flank of the Lichiang Range, Yunnan, at 3500–3800 m., Aug. 1906, G. Forrest 2694 (E); seen. Isotype (вм); seen.

RANGE. A species of western Yunnan and southwestern Szechwan, at elevations of 2800 m. to 5100 m.

Examples. Yunnan: Rock 9924, 9669, 9766, 9755, 6082, 6085, 5696, 10797, 6091; K. M. Feng 1982, 2001; Forrest 6556, 11130; Kingdon Ward 995. Szechwan: Kingdon Ward 4846, 4811.

236. Delphinium campylocentrum Maxim. Act. Horti Petrop. 11: 31. 1889. Fig. 19, B.

Delphinium tongolense Rehd. & Kobuski, Jour. Arnold Arb. 14: 11. 1933, pro parte, not Franchet, 1893.

To about 7 dm. tall, the stem simple below, with a few scattered upcurved branches in the inflorescence, scattered-pilose below, more densely so above and more or less glandular, leafy, the leaves rather evenly developed; petioles slender, with somewhat dilated base; blades mostly 3-fid, the segments subsessile, cuneate, mostly 3-5 cm. long, the 2 lateral bilobed, then pinnately incisely lobed or coarsely toothed, the central palmately lobed or toothed, these lobes broadly lanceolate, mucronate, strigulose, paler beneath than above; inflorescence open, paniculate, several flowered; bracts mostly narrowly linear, entire, to ca. 10 mm. long; pedicels 2-5 cm. long, slender, with 1 to 3 bracteoles ca. 4-6 mm. long; sepals purplish blue, 15-18 mm. long, glabrous in original description, strigose in specimens seen, cornigerous below apex with terete outgrowths mostly 2-lobed and 2-4 mm. long; upper sepal elliptic-oval, 15 mm. by 8 mm., the spur coarse, strongly incurved (half circle or more), almost 2 cm. long, 4 mm. wide at base; lateral sepals broadly oblong, 13 mm. by 6.5 mm., pubescent along the midrib; lower sepals oblong, 18 mm. by 5 mm.; upper petal laminae glabrous, 11-12 mm. long, slightly 2-lobed, the strongly curved spur as long as the blade; lower petal laminae 11 mm. long, pilose, deeply cleft, oblong, clawed; stamens 5-7 mm. long, glabrous; anthers yellowish, 1.5 mm. long; follicles 3, glabrous.

Type: "Ad limites Kansu et Szetschuan, Valle fl. Heiho, 24 Julii 1885," Potanin (LE); seen.

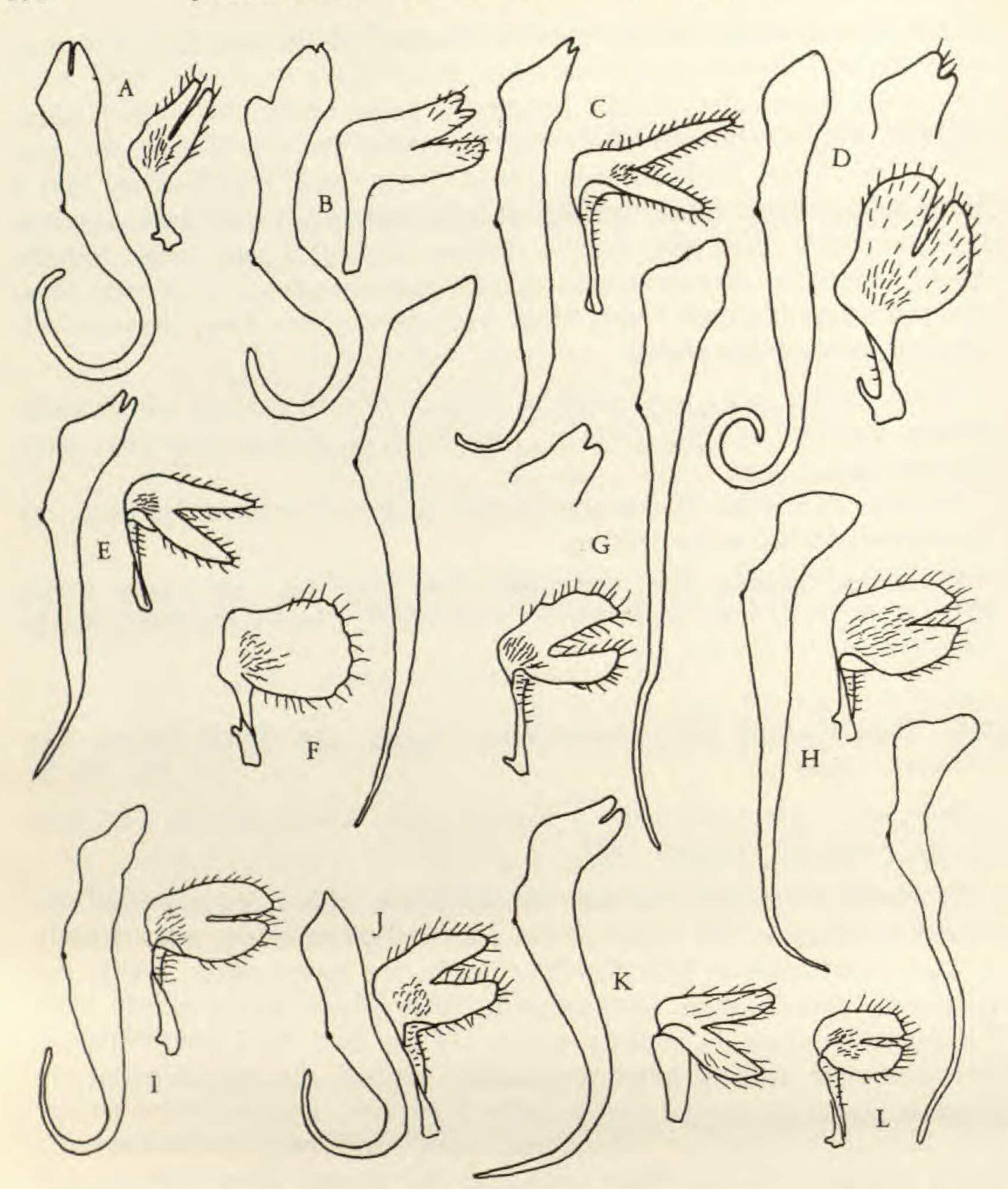


FIGURE 19. Delphinium, GROUP X. Petals, the upper spurred, the lower clawed. A. D. bulleyanum; upper lamina 9 mm. long, spur 18 mm.; lower lamina 5 mm. long, claw 4 mm.; drawn from Rock 9924 (us). B. D. campylocentrum; upper lamina 12 mm. long, spur 14 mm.; lower lamina 6.5 mm. long, claw 5 mm.; drawn from Harry Smith 4138 (A). C. D. eriostylum; upper lamina 11 mm. long, spur 17 mm.; lower lamina 9 mm. long, claw 6 mm.; drawn from Esquirol 141, TYPE (E). D. D. hamatum; upper lamina 10 mm. long, spur 22 mm.; lower lamina 9 mm. long, claw 5 mm.; drawn from Rock 22852 (uc) and upper lamina tip from TYPE (P). E. D. polyanthum; upper lamina 9 mm. long, spur 15 mm.; lower lamina 7 mm. long, claw 5 mm.; drawn from Licent 7719 (BM). F. D. potaninii; upper lamina 12 mm. long, spur 20 mm.; lower lamina 7 mm. long, claw 5 mm.; drawn from Farges 630, ISOTYPE of D. fargesii (NY). G. D. potaninii; upper lamina 10 mm. long, spur 23 mm.; lower lamina 7 mm. long, claw 5 mm.; drawn from E. H. Wilson 1999 (GH). H. D. sinovitifolium; upper lamina 9 mm. long, spur 23 mm.; lower lamina 7 mm. long, claw 5 mm.; drawn from E. H. Wilson 3088, ISOTYPE (P). I. D. spirocentrum; upper lamina 10 Specimens seen. Kansu and Szechwan: at about 3000 to 3500 m., H. Li 74095 (E); H. Smith 4138 (A, BM); Ching 849 (E, GH, NY, US); Rock 13161 (GH, NY), 13111 (GH, NY), 13109 (GH, US).

# 237. Delphinium eriostylum Lévl. Bull. Herb. Boiss. II. 6: 505. 1906. Fig. 19, C.

Apparently tall robust perennial, the stem coarse, smooth, glabrous, remotely leafy; upper leaves 3-5-fid almost to base, with scattered stiff hairs on both surfaces but especially on veins beneath, the blades 5-12 cm. wide, each segment narrow cuneate-obovate, incised ca. halfway to midrib into lance-ovate lobules or teeth 3-10 mm. long, 1-5 mm. wide, acute to acuminate; inflorescence a few branched open panicle, each raceme 2- to 6-flowered; bracts stiff-hairy, lance-linear, 2-3 cm. long, 2-3 mm. wide, long-acuminate; pedicels stiff, 2-7 cm. long, arched-ascending to suberect, with few to rather many spreading glandular hairs; bracteoles linear-subulate, 7-15 mm. long, bristly, near the middle of the pedicel; sepals violet, subglabrous; upper sepal ovate, 14 mm. by 9 mm., obtuse, the strongly curved spur ca. 20 mm. long; lateral sepals round-ovate, 16-18 mm. by 10 mm., rounded-obtuse; lower sepals elliptic-obovate, 18-20 mm. by 8 mm., pointed; petals bluish, the upper laminae slightly oblique, 12 mm. long, 4 mm. wide, glabrous, bidentate, the spur ca. 16 mm. long; lower laminae perpendicular to the claws, 7 mm. by 3 mm., bifid to beyond middle into lance-oblong lobes ca. 4.5 mm. long, ciliate and somewhat bearded; stamens 6-7 mm. long, glabrous; anthers dark, linear-oblong, 1.5 mm. long; carpels 3, sparsely stiff-hairy.

Type: Kweichow, Ta-tsong, Kouy-hoa, Esquirol 141 (E); seen.
Another specimen came from the same area, 2095 without collector's name (E), and one from Yunnan-sen district, Gan-chouen, Cavalerie 4486 (E).

# 238. Delphinium hamatum Franchet, Pl. Delavay. 28. pl. 7. 1889. Fig. 19, D.

Delphinium ceratophorum var. brevicorniculatum W. T. Wang, Acta Bot. Sinica 10: 157. 1962. Based on T. T. Yü 9598 from Yunnan (A); seen.

Perennial from a large root system; stem ascending, to ca. 2 dm. long, mostly solitary, spreading-hairy, the hairs ca. 1 mm. long; leaves basal, the petioles purplish, slender, hairy, 3–12 cm. long, thin-vaginate at base; blades 3- or 5-partite, pentagonal, 1–7 cm. long, somewhat wider, the

mm. long, spur 20 mm.; lower lamina 7.5 mm., claw 5.5 mm.; drawn from Forrest 17187, TYPE of D. pediforme (E). J. D. spirocentrum; upper lamina 9 mm. long, spur 16 mm.; lower lamina 7.5 mm. long, claw 6 mm.; drawn from Handel-Mazzetti 4656, ISOTYPE (E). K. D. tongolense; upper lamina 9 mm. long, spur 16 mm.; lower lamina 7 mm. long, claw 6 mm.; drawn from Harry Smith 11594 (A). L. D. tongolense; upper lamina 8 mm. long, spur 17 mm.; lower lamina 5 mm. long, claw 5 mm.; drawn from Soulié 396 (P).

lobes obovate-cuneate, strigulose above, more loosely pubescent beneath, ca. 1 cm. wide and with few coarse triangular teeth 1–6 mm. long; flowers 1 to few, racemose; lower bracts often foliose, the others lance-linear, 5–15 mm. long, acuminate; pedicels arcuate-erect, 1–3 cm. long; bracteoles 2, linear, to 1 mm. broad, near the flower; sepals purplish blue, strigulose without, the upper sepal ovate, 13–16 mm. long, 8–10 mm. wide, acutish, the spur 22–25 mm. long, 3.5 mm. wide at base, tapered gradually to the hamate apex; lateral sepals ovate-oblong, strigose on midvein, rounded at apex, 15–17 mm. by 8–10 mm.; lower sepals elliptic-ovate, 16–20 mm. long, 10–12 mm. wide, obtuse; petals pale blue, the upper laminae almost straight, 10 mm. long, glabrous or nearly so, entire to emarginate; the spur 22 mm. long; lower laminae bearded, 9 mm. by 8 mm., cleft to ca. 4 mm., the claw 5 mm. long; stamens 6–7 mm. long, slightly ciliate; anthers dark, 1.5 mm. long; follicles 3, short-hairy, oblong, 12–15 mm. long, the styles an additional 3 mm.; seeds brown, 2 mm. long, winged on angles.

Type: Yunnan, "in collibus calcareis ad Fang-yang-tchang supra Moso-yn, alt. 3200 m.," Oct. 14, 1887, Delavay (р), seen; isotype (к), seen. Additional sheets with somewhat different data as to elevation are (к, му). Distribution. A species from Yunnan, largely toward Tibet.

Collections seen. Forrest 15555 (K); Rock 23457 (NY), 22852 in part (NY, uc, us), Delavay 1676 (K, P), 2676 (P); T. T. Yü 9832 (A), 12702 (A), 15544 (A).

239. Delphinium polyanthum W. T. Wang, Acta Bot. Sinica 10: 145. 1962. Fig. 19, E.

Stem 1.5-2 m. tall, ca. 8 mm. in diameter, glabrous, branched, equally foliose; the middle cauline leaves with non-vaginate petioles slightly longer than the blades; the latter broadly pentagonal, 6.5 cm. long, 10 cm. wide, cordate at base, tripartite 6/7 of their length, the middle part entire below, 3-fid to the middle, the lobes further divided or toothed, the lateral parts unequally bifid to below the middle, loosely strigulose beneath, hirtellous on nerves above; racemes 15-20 cm. long, forming a terminal pyramidal panicle; peduncles 6-10 cm. long, glabrous, axes with white retrorsely appressed hairs above intermixed with yellow glandular hairs; pedicels divergent, 1.5-3 cm. long; bracteoles just above middle of pedicel, subulate, 1.5-4 mm. long, 0.3 mm. wide; sepals blue, elliptic, 10 mm. long, loosely puberulent; spur 18 mm. long; upper petal laminae yellowish, glabrous, emarginate; lower laminae bluish, yellow bearded below the middle, bifid into lance-triangular lobes, ciliate, the claw about as long as blade; stamens glabrous; carpels 3, glabrous, 11-20 mm. long in maturity; seeds obconic-triquetrous, 1.5 mm. long, scaly laminate.

Type: Yunnan, Teh-chin, Pai-ma-shan, 3500 m., Sept., 1935, C. W. Wang 69805 (PE), not seen; photo. (E), seen.

Two herbarium sheets (Shansi, Licent 7719 (BM) and W. Kansu, Licent 4279 (BM) agree with the description and photograph of the type, but have glabrous pedicels.

240. Delphinium potaninii Huth, Bull. Herb. Boiss. 1: 332. pl. 14. June, 1893.
Fig. 19, F, G.

Delphinium grandiflorum var. potaninii Brühl in Brühl & King, Ann. Bot. Gard. Calc. 5: 98. 1896.

? Delphinium potaninii var. latibracteolatum W. T. Wang, Acta Bot. Sinica 10: 147. 1962. Based on F. T. Wang 22014 which I have not seen, but which has bracteoles 10-12 mm. long, 1-1.2 mm. wide.

Delphinium fargesii Franchet, Bull. Soc. Philom. Paris VIII. 5: 164. (August?) 1893. Type from Szechwan, district Tchen-kéou-tin, Farges 630

(P), seen; four sheets all with lower petal laminae deeply divided.

Delphinium bonvalotii Franchet, loc. cit. 165. (August?) 1893. Type, Szechwan, near Ta-tsien-lou, Prince H. d'Orleans & Bonvalot (P); seen. Lower petal lamina deeply lobed, gaping.

Perennial from a thick root, the stems several, erect, thick, leafy, subglabrous, tall; petioles glabrous to hairy, the lower 1 dm. or more long, scarcely dilated at the base, the upper shorter; lower leaf blades broadly rounded in outline, 8-15 cm. broad, subglabrous or with stiff hairs along the veins beneath, 5- or 7-parted into broad cuneate-obovate segments, these incisely lobed or toothed with sharp angles and acute lobes or teeth 8-30 mm. long; upper leaves reduced, 3- or 5-parted; inflorescence an open panicle, largely glabrous; lower bracts foliaceous, 3-parted into lanceolate lobes to ca. 3 cm. long, upper bracts entire and lanceolate to setaceous, then 3-6(-10) mm. long; pedicels arched or straight, more or less divaricate, slender, 1-5 cm. long; bracteoles setaceous to linearlanceolate, 2-6 mm. or more long, near the middle of the pedicel; sepals bright blue or with some violet, more or less strigulose without; upper sepal ovate, 10-20 mm. long, 5-12 mm. wide, the spur 20-30 mm. long, 3-4.5 mm. wide at base, strongly curved, with a blunt tip; lateral sepals elliptic, 18-22 mm. long, 10-12 mm. wide, rounded at apex; lower sepals ellipticrhombic, 14-24 mm. long, 8-9 mm. wide, rounded at tip; petals bluish, the upper laminae almost straight, 8-10 mm. long, entire to emarginate, glabrous; lower laminae hirsute at base, ciliate on margins, oblong to oblong-obovate, 6-8 mm. long, mostly divided into lance-oblong lobes 3-4 mm. long, claw ca. 5 mm. long; stamens glabrous, 6-7 mm. long; anthers dark, 1.3-1.6 mm. long; follicles 3, divergent, glabrous to pubescent, 10-13 mm. long, the styles an additional 2.5 mm.; seeds brown, ca. 1.3 mm. long, covered with minute scales.

TYPE: Kansu, China, G. N. Potanin, 1885 (в), not seen; isotype (к), seen.

RANGE. Apparently quite widely distributed in western China, at elevations of about 3000 to 4200 m.

Examples. Szechwan: E. H. Wilson 1999 (BM, GH, US), 819 (GH, US), 1088 (BM), 3095 (A), 3097 (K), 4702 (K, P), 1169 (GH); K. L. Chu 3246 (E); Henry 8792 (GH, P); Pratt 344 (K); C. L. Sun 476 (US); Rock 16743 (A, US), 23992 (UC), 16637 (US), 16694 (GH, NY, US), 24166 (GH, UC); W. P. Fang 1480 (US); Harry Smith 4072 (A); T. K. Wang & T. S. Wen 581 (A); W. Hupeh: Wilson 1523 (NY). Yunnan: Ducloux 5153 (P).

241. Delphinium pseudo-tongolense W. T. Wang, Acta Bot. Sinica 10: 153. 1962.

Stem 6-10 dm. high, 5 mm. in diameter at base, glabrous, often branched, equally foliose; median cauline leaves with petioles 7-8 cm. long, not vaginate; the blades broadly pentagonal, ca. 7 cm. long, 11-12 cm. wide, cordate at base, 3-parted to 6-10 mm. above the base, the middle part rhombic-ovate, acuminate, 3-lobed to below the middle, the lobes with lobules acutely dentate; lateral parts bifid and with secondary or tertiary lobules loosely strigulose beneath, loosely hirtellous along veins on upper surface; racemes 5-18 cm. long, axillary and terminal, forming an open panicle; pedicels 1-3 cm. long, ascending; bracteoles 4.5-7 mm. long, near middle of pedicel, with spreading yellow glandular hairs and retrorsely appressed white ones; sepals bluish purple, oblong to oblong-obovate, 12-19 mm. long, puberulent; spur about as long as sepals, subulate, spirally decurved at middle; upper petal laminae blue or yellowish, glabrous, rounded or emarginate at apex; lower laminae blue, ovate, 2-lobed to middle, yellow bearded at base, long-ciliate, claw appendiculate, as long as limb; stamens glabrous; carpels 3, glabrous or puberulent above.

Type: Szechwan, Pao-Lsing, T. P. Soong 38915 (PE), not seen; photo. (E), seen.

Said to be near *D. tongolense*, but with long-acuminate leaf parts, bracteoles at middle of pedicel, and spur spirally decurved.

242. Delphinium sino-vitifolium W. T. Wang, Acta Bot. Sinica 10: 152. 1962. Fig. 19, H.

Delphinium vitifolium Finet & Gagnep. Bull. Soc. Bot. France 53: 126. 1906, not Willd.

Stem slender with soft spreading hairs, 3.5–4 dm. high; cauline leaves few, pilose on both surfaces, slightly cordate, 3–5 cm. in diameter, 3-parted less than halfway into lobes broader than long, these lobes in turn divided into semi-ovate mucronate-acute lobules 3–5 mm. long, somewhat broader; petioles 3–5 cm. long, hirtellous; upper leaves smaller, 1–1.5 cm. long, sessile; raceme lax, few flowered, simple; lower bracts foliose, to 1.5 cm. long, the upper subfiliform, pilose, ca. 8 mm. long; pedicels hirtellous, slender, 3–4 cm. long; bracteoles setiform, pilose, 5–6 mm. long, removed as much as 1 cm. from the flower; sepals blue, pubescent, the upper ca. 10 mm. long with a spur 25 mm. long and hamate at apex; other sepals deltoid-ovate, ca. 12 mm. long; petals bluish, the upper laminae oblique, entire, rounded at apex, 9 mm. long, the spur 22–24 mm. long; lower laminae oblique, oblong-ovate, 7 mm. long, bearded yellow, white-ciliate, divided one third its length, claw hirtellous, appendiculate, 5–6 mm. long; anthers dark, elliptic; carpels 3, glabrous.

Type: Szechwan, 3200-4300 m., Sept., 1904, Wilson 3088 (P, A); seen.

243. Delphinium spirocentrum Hand.-Mazz. Symb. Sinicae Pt. 7: 280. 1931. Fig. 1931.

Delphinium spirocentrum var. hirsutum Chen, Bull. Fan Mem. Inst. Biol. Peping (n.s.) 1: 169. 1948. Isotype, T. T. Yü 7769 (A) from Yunnan; seen.

Delphinium spirocentrum var. grandibracteolatum W. T. Wang, Acta Bot. Sinica 10: 153. 1962. Isotype, Yunnan, T. T. Yü 9018 (A); seen.

Delphinium pediforme Comber, Notes Bot. Gard. Edinb. 18: 237. 1934. Type, Yunnan, Mekong-Salwin divide, Salwin Valley, Forrest 17187 (E), seen; istoype (P), seen.

Delphinium spirocentrum var. pediforme (Comber) W. T. Wang, Acta Bot. Sinica 10: 152. 1962.

Stems usually more than one, simple, 1-9 dm. tall, rather slender, densely retrorse-villous, scattered leafy; lower petioles to ca. 3 dm. long, villous, more or less dilated at base, the upper cauline much shorter; leaves rounded-pentagonal in outline, 3-14 cm. in diameter, green and strigose above, paler and with longer stiffer hairs beneath, 5-fid to within 1 cm. of the base, the segments cuneate-obovate, rather shallowly pinnatifid into few lance-oblong teeth or lobules 2-5 mm. wide and rounded to obtuse at apex; racemes simple, rather few flowered, to ca. 2 dm. long; pedicels erect, 2-8 cm. long, with spreading or somewhat retrorse hairs; bracteoles linear, 8-10 mm. long, hairy, placed near the middle of the pedicel or above or below; sepals purplish blue, ovate, strigose without, the upper 15-18 mm. by 7-10 mm., obtuse, the spur sometimes coiled in an almost complete circle, ca. 2 cm. long, 5 mm. wide at base; lateral sepals oblong, 20 mm. by 8 mm.; lower sepals ca. 22 mm. long, 10 mm. wide, obtuse; petals blue, the upper laminae straight, 9-11 mm. long, entire to emarginate, the spur 16-20 mm. long; lower laminae elliptic-obovate, ciliate, bearded at base, 7-11 mm. long, shallowly to deeply bifid, the claw 5-6 mm. long, not appendaged; stamens 6-7 mm. long, glabrous; anthers blue, linear, 2 mm. long; follicles 3, hairy, 15-30 mm. long; seeds brown, 1.3 mm. long, squamate.

Type: Szechwan, west side of Mt. Piepun near Dschunglien, Handel-Mazzetti 4656 (w), not seen; isotype (E), seen.

DISTRIBUTION. Occurring at elevations of 2800 to 4800 m., Szechwan and Yunnan.

Examples. Szechwan: Handel-Mazzetti 7302 (GH, NY); Rock 18015 (US), 16694 (GH, NY, US), 16637 (US), 24166 (GH, UC), 24589 (NY, UC), 16760 (P, US), 23979 (E, GH, NY), 16922 (NY, US), 16929 (GH, UC, US), 18294 (US), 13979 (GH, NY, UC), 16814 (F, US), 16398 (GH, US), 16694 (GH, NY, US); Forrest 22184 (US); Kingdon Ward 4375 (E). Yunnan: Rock 24771a (GH, K, NY, UC), 9706 (NY, UC, US), 23080 (K, NY, UC, US), 23101 (GH, UC), 22852 (BM); Yü 7427 (A), 14577 (A, BM, E), 22461 (A, E), 23215 (A, E); C. W. Wang 68543 (A), 68635 (A); Kingdon Ward 4617 (E), 4604 (E), 4826 (E); Schneider 3249 (GH, US).

244. Delphinium tongolense Franchet, Bull. Soc. Philom. Paris VIII. 5: 166. 1893. Fig. 19, K, L.

Perennial from woody base; stems 1 or more, to 1 m. tall, glabrous or with long white or yellowish hairs, (some with enlarged base), few branched above, leafy almost to the summit; petioles slender, the lower 2-3 dm. long, not much widened at base, the upper shorter; blades palmately 3or 5-lobed to middle or below, the lobes cuneate-obovate, coarsely rather few toothed or lobed, blade as a whole 5-10 cm. wide and long, mostly subglabrous; inflorescence largely paniculate, the branches few, lax, few to several flowered; lower bracts foliaceous, trifid, to 2.5 cm. long, the upper entire, linear or broader, 5-15 mm. long; pedicels slender, ascending, subglabrous to spreading-pubescent, 2-5 cm. long; bracteoles linear-setaceous, 4-7 mm. long, near the middle of the pedicel; flowers deep to pale blue; upper sepal ovate, 15-17 mm. long, 8-10 mm. wide, pubescent, obtuse, the spur 2.5 cm. long, 4 mm. wide at base, pointed; lateral sepals 13 mm. by 10 mm., rhombic-ovate, rounded at ends; lower sepals 15 mm. by 10 mm., more narrowed at base; petals bluish, the upper laminae oblique, 8 mm. long, entire to bidentate, the curved spur 18-20 mm. long; lower laminae bearded, 5-7 mm. long, with 2 divergent lance-oblong lobes 3.5-4 mm. long, claw broad, not appendaged, 5 mm. long; stamens 6-7 mm. long, glabrous; anthers dark, 1.6 mm. long; follicles 3, subglabrous, divergent, 1-2 cm. long, the styles an additional 2 mm.; seeds many, angular, covered with lamellose papillae.

Type: Western China, Szechwan, Tongolo, valley of Olong-chen, R. P. Soulié 396 (P); seen. Soulié 2383 is in a type cover at (K).

RANGE. Western China and adjacent Tibet at perhaps 3500 to 4500 m.

Examples. Szechwan: E. H. Wilson 3089 (K, P); Soulié 2383 (K, NY, P); Stevens 454 (F); McLaren's collectors 258 (E, UC), 206 (E). Yunnan: Ducloux 4600 (P). Sikang: H. Smith 11340 (A), 11339 (MO, NY), 11594 (A). W. Tibet: Batang, Soulie 3890 (P), 3889 (P), 3888 (P), 3050 (P).

# REPRESENTATIVE EXSICCATAE

(Unfortunately many important specimens, especially of early collections in Siberia, were not numbered. To cite Regel collections, for instance, is almost useless; often several made in the same year represent different species, so to say "Regel in 1891" is not definitive.)

Abolin 8193, D. confusum
Aitchison 957, D. brunonianum; 1004,
kohatense; 671, semibarbatum; 862,
suave; 559, 575, uncinatum
Alboff 194, 195, 196, 182, D. pyramidatum; 190, schmalhausenii; 15, speciosum
Alexeenko 2620, D. crisbulum

Alexeenko 2620, D. crispulum
Ali, Shaukat 53, 54, D. brunonianum
Anderson, T. 345, D. viscosum
Appleton in 1906, D. dasyanthum;
3862, suave

Arnold 104, 213, D. brunonianum; 12, kamaonense
Artemjev 4266, D. duhmbergii
Atkinson 24250A, D. roylei
Aucher 79, D. tuberosum

Bacon, Eliz. 73, D. suave
Bailey, F. M. 100, D. vestitum
Balansa 859, D. dasystachyum; 1352,
formosum; 1353, longebracteatum;
728, peregrinum; 858, venulosum

Balls, E. K. 496, 1975, D. formosum; 1207, 2406, peregrinum

Balls & Gourlay 1977, 1992, D. dasystachyum; 1977a, longebracteatum

Banerji 1231, D. vestitum

Barbey 295, D. fissum ssp. anatolicum Beauvais 409, D. delavayi; 1074, mosoynense

Becker, Al. 29, D. turkmemum; in 1873, D. ochroleucum

Biskam 2253, D. denudatum

Bodinier & Ducloux 370, D. taliense

Bohnhof 163, D. maackianum

Boissier, June 1842, D. cinereum; in 1846, ithaburense; April 1846, peregrinum

Bor in 1941, D. cashmerianum Borissowa 83, D. semibarbatum

Bornmüller 972, D. albiflorum; 6060, 6062, aquilegifolium; 1529, 2674, 3093, venulosum

Bourgeau 9, D. peregrinum Brandis 731, D. vestitum

Brown, W. E. 804, D. nuristanicum

Bullock 7, D. anthriscifolium var. calleryi; 10125, anthriscifolium var. savatieri

Burtt & Nairn 586, D. suave Bushnell 470, D. maackianum

Callery 6, 51, D. anthriscifolium var. calleryi

Calvert & Zohrab 1347, D. albiflorum Capus 50, 51, 53, and June 12, 1886, D. ochroleucum

Carmichael 823, D. chefoense

Cavalierie 2344, 2957, D. anthriscifolium; 2169, 2822, anthriscifolium var. calleryi; 2095, 4486, eriostylum; 7871, georgei

Cave, G. H. 6, D. caeruleum; 177, and in 1910, in 1917, in 1919, D. viscosum

Chaffanjon 804, D. biternatum

Chand, T. R. 72A, 588, 406, 887, D. brunonianum; 576, cashmerianum; 881, densiflorum; 3449, 7192, 31250, stapeliosum; 1190, vestitum

Chaney 136, 467, 1104, D. grandiflorum

Chang & Jen 6099, D. glabricaule

Chapman, F. S. 35, D. caeruleum; 167, 201, gyalanum

Chen, F. H. 341, D. maackianum

Chiao 1758, D. hirticaule Chien 5877, D. anthriscifolium var.

calleryi

Ching, R. C. 1363, 8442, D. anthriscifolium var. calleryi; 849, campylocentrum; 21392, 21616, 30509, ceratophorum; 21456, delavayi; 21418, glabricaule; 22022, 30535, hirticaule; 30572, likiangense; 922, 1070, pseudograndiflorum; 1123, pulcherrimum; 657, 6576, pylzowii; 21372, tatsienense; 861, trichophorum; 534, tsoongii

Chu, K. L. 3246, D. potaninii; 3606, scaposum

Chung 2602, anthriscifolium var. callervi

Clarke, C. B. 29095B, D. roylei; 29506, pyramidale; 16117, 6168, 16354, 16381, 38970, 40301, 44861, stapeliosum

Collett, H. 964, D. burmaense; 5404A, vestitum

Colom 282, D. altissimum

Conrath 1889, D. schmalhausenii

Cooper, R. E. 760, D. caeruleum; 5309, 5648, cashmerianum; 2024, 2294, cooperi; 4322, ludlowii; 4791, muscosum; 5253, vestitum; 605, 1003, 2204, 4911, viscosum

Cooper & Bulley 2008, 2556, D. altissimum; 4114, 4223, scabriflorum

Coventry 226, D. pyramidale

Crookshank, Helen 324, 366, D. centeteroides

Cunningham, R. 322, D. potaninii; 327, souliei; 352, trichophorum

Davis, P. H. 30593, 31305, D. albiflorum; 32562, buschianum in part; 22801, 22593, 23061, 23325, 23349, 23954, 24370, carduchorum; 23612, 23327, 32443, 32562, crispulum; 31669, 31999, dasystachyum; 39053, davisii; 13140, 14703, fissum ssp. anatolicum; 21122, 21211, formosum; 38373, ilgazense; 4608 & 4608a, 4894, ithaburense; 31496, kurdicum; 33853, 33907, ochroleucum; 4801, 9913, 13473, 14410, 15421, 31567, 38840, peregrinum; 32782, 32788, 32813, venulosum;

35701, virgatum

Delavay, Abbé 967, 1845, D. ceratophorum; 22, 74, 1846, 1847, 4109,
delavayi; 1676, 2676, hamatum;
2484, likiangense; 8717, mosoyense;
993, 1844, 4220, pycnocentrum; 9,
taliense; 967 bis, 6515, 6670, yunnanense

Dhwoj, Lall 49, 0253, D. altissimum; 556, caeruleum; 0191, 0641, drepanocentrum; 0238, glaciale; 36a, 122, himalayae; 49, 267, incisum; 35, 225, nepalense; 234, pyramidale; 253, scabriflorum; 92, 128, 0258, vestitum

Dickason 369, D. brunonianum; 9052, burmaense; 367, 368, 370, 371, 373, cashmerianum; 366, denudatum; 365, roylei; 335, pyramidale

Dinsmore 1864, D. ithaburense

d'Orléans, Prince, & Bonvalot 7-29-1890, D. tatsienense

Dorsett & Dorsett 696, 3367, D. grandiflorum

Dorsett & Morse 7051, D. grandiflorum

Douglas, W. O. 161, 236, D. aquilegifolium; 39, ithaburense

Drummond, J. R. distributions 1313, 4341, 4346, 4348, D. brunonianum; 8328, denudatum; 14811, kohatense; 4345, 4349, 6285, vestitum

Ducloux 597, D. ceratophorum; 5337, delavayi; 579, hirticaule; 3875, mosoynense; 5153, potaninii; 596, tatsienense; 4600, tongolense; 370, 2874, 5866, 7329, yunnanense

Duthie, J. F. 745, 5301, in 1896, 7-25-1899, 7-24-1899, 13370, 13751, 13921, D. brunonianum; 794, 3804, 5302, cashmerianum; 2677, 5303, densiflorum; 2675, 5299, kamaonense; 13490, 14123, pyramidale; 13440, 14091, roylei; 5304, 19119, vestitum

Egorova, Tzelev, & Czerepanov 418, D. pallidiflorum
Emme, L. 451, D. dasyanthum

Esquirol 24, 122, D. anthriscifolium var. calleryi & var. savatieri respectively; 141, eriostylum

Eyerdam, W. 2, 7-27-28, 7-14-28, 7-15-28, 8-25-28, D. brachycentrum

Faber, 725, D. anthriscifolium

Falconer 66, D. brunonianum; 65, cashmerianum; 60, denudatum; 62, pyramidale; 61, roylei; 64, vestitum

Fan & Li 98, D. anthriscifolium

Fang, W. P. 758, D. anthriscifolium; 12258, anthriscifolium var. calleryi; 2944, delavayi; 9286, grandiflorum; 1083, 4037, orthocentrum; 2241, spirocentrum; 4038, sungpanense; 4276, tatsienense

Farges 1146, 1440, 1441, D. anthriscifolium; 630 bis, 630 ter, hirticaule;

630, potaninii

Farrer 159, D. georgei; 1156, 1867,

micropetalum

Farrer & Purdom 242, 243, D. albo-caerulem; 237, beesianum; 578, 611, grandiflorum; 253, monanthum; 710, pylzowii; 798, 800, 803, trichophorum

Faurie 26, D. maackianum

Fedtschenko in 1901, D. dasyanthum
Feng, K. M. 2395, D. beesianum;
1982, 2001, bulleyanum; 2714,
chefoense; 217, 1697, delavayi;
2742, 2272, georgei; 2207, mairei;
2514, mosoynense; 1836, 2115, pogonanthum; 2257, tatsienense; 2841,
tenii; 1726, umbrosum; 89, yunnanense

Field & Lazar 730, 850, D. peregrinum Fleming 5-23-51, D. uncinatum

Forrest, G. 6694, 11276, 6364, 14857, 18961, 20204, 20572, 22967, 22577, D. beesianum; 2694, 6556, 11130, bulleyanum; 6403, 6568, 2763, 10967, ceratophorum; 3035, 6690, 11363, 15173, 15198, 16942, 22471, 22483, coleopodum; 2963, 2861, 2604, 6319, 28587, 2604, 6319, delavayi; 11353, georgei; 15555, hamatum; 6483, 6540, 2903, 11360, 11052, 11203, 16949, 15322, 15170, 16949, likiangense; 221, 27516, 27225, 25091, micropetalum; 20780, monanthum;

2866, 6533, 15233, mosoynense; 6538, 10968, 11449, 15112, 16951, 23185, 22378, pseudograndiflorum; 14929, 17187, 19031, 30044, 22184, spirocentrum; 6494, 6538, tatsienense; 6683, 3030, 11305, 16923, 15194, 22347, 22603, 22966, trichophorum; 14665, 18962, 20060, 20979, tsarongense; 25052, umbrosum; 2977, 7216, 15536, yunnanense

Frödin 328, D. vanense

Fu, K. N. 1146, D. acuminatissimum Furse 3654, 3785, D. albiflorum; 2627, aquilegifolium; 3061, cyphoplectrum; 3732, dasystachyum; 3404, macrostachyum

Furse & Synge 329, 330, D. aquilegifolium; 784, laxiusculum

Gaillardot 52, 367, D. peregrinum
Garrett 452, D. siamense
Giles 6-24-86, D. kohatense
Gill 151, D. brunonianum
Gillett, J. B. 9501, 12473, D. micranthum; 11782, pallidiflorum

Gillett & Rawi 7223, 7404, 11206, D. micranthum

Gilliatt-Smith 2514, D. crispulum

Giraldi 4819, 4820, 4823, 4825, 4826, D. giraldii

Gontchazov 8-22-1928, D. dasyanthum Gould, B. J. 1412, D. glaciale; 508, kingianum; 1300, viscosum; 1598, wardii

Griffith 45, D. centeteroides; 43, ko-hatense; 42A, 461, 827, D. stapelio-sum

Grossheim, A. 305, D. crispulum; 37, ochroleucum

Grossheim & Schischkin 333, D. flexuosum

Guest, E. V. 7-28-33, D. kurdicum Guest & Ludlow-Hewitt 2691, D. micranthum

Gurvitsch in 1937, D. laxiusculum Guthrie, J. in 1947, D. gyalanum

Haines, R. W. 416, D. kurdicum; 513, macrostachyum; 1320, micranthum; 1712, quercetorum

Hanbury-Tracy 143, D. brunonianum; 195, pseudograndiflorum

Handel-Mazzetti 5495, D. autumnale; 11802, anthriscifolium; 8128, beesianum; 4105, coleopodum; 9712, micropetalum; 5103, mosoynense; 4576, 7819, 7424, pogonanthum; 4656, 7302, spirocentrum; 5515, trichophorum; 7934, tsarongense; 7809, umbrosum

Haradjian 552, 571, 2537, D. fissum ssp. anatolicum; 1525, 2158, peregrinum

Harriss, S. A. 15837, D. suave

Haussknecht, April 1868, D. cyphoplectrum; in 1865, peregrinum; June 1867, quercetorum; July 1868, saniculifolium

Hay 373, D. centeteroides

Hazara, Burtt & Kazmi 1266, D. pyramidale

Heideman 5–27–1932, D. pallidiflorum Heideman & Aliev 7–2–1932, D. szowitsianum

Hemsley 7, D. anthriscifolium var. calleryi

Henry, A. 1348, 1966, 5862, D. anthriscifolium; 7263, anthriscifolium var. calleryi; 200, anthriscifolium var. savatieri; 6952, 6952A, henryi; 9668, 9668A, pogonanthum; 8792, potaninii; 7448, trifoliolatum; 9272, 9272A, 13440, yunnanense

Hingston 367, 408, D. gyalanum

Hohenacker in 1834, in 1835, D. laxiusculum; in 1838, ochroleucum; in 1834, puniceum; July 1838, szowitsianum

Hooker, J. D. 2293, D. glaciale Horner, S. 152, 153, D. cyphoplectrum Hosie in 1904, D. trichophorum; in 1904, tsarongense

Hsia 3159, 2065, D. grandistorum Huggins, P. 39, D. densistorum Hultén 733, 638, D. brachycentrum

Ikonnikov-Galitzky 365, 746, 3335, 3428, D. cheilanthum; 785, dissectum; 2915, elatum; 210, 314a, 802, grandiflorum; 82, triste

Jacquemont 668, 2025, D. brunonia-

num; 720, 1896, caeruleum; 671, 1005, cashmerianum; 721, 883, denudatum; 673/791, 791, 1171, roylei; 672, uncinatum; 2134, vestitum Jafri & Akbar 2197, D. centeteroides Jaschke 2495, D. lacostei

Kabir 14811, D. aquilegifolium Karelin & Kiriloff 1169, D. dasyanthum; 1164, duhmbergii; 1168, elatum

Karjagin & Jsoev 8-25-1933, D. foetidum

Karjagin & Safiev 150, D. buschianum Karo, F. 188, D. cheilanthum; 207, grandiflorum

Kass & Nuri 27607, D. quercetorum Keng 1311, D. anthriscifolium var. calleryi; 880, anthriscifolium var. savatieri

Kerr, A. F. G. 337, 4454, 6612, D. siamense

Kingdon-Ward; see Ward

Kitamura 8-2-1955, D. nuristanicum Knorrig, O. E. 368, D. knorringianum

Koelz, W. 12719, D. afghanicum; 18257, aquilegifolium; 1000A, 1233, 2400d, 2407, 2508, 2804, 2835a, 3026, 5562, 6516, 6622a, 6703, 6841, 7006, 9551, 10112, brunonianum; A38, 1277, 850, 588, 1313, 2787, 2803a, 2973, 5803, 6026, 6927, 10028, 10041, cashmerianum; 21082, densiflorum; 1848, 3163, 4841, 4638, 4963, 8344, 8659, 8328, 21113, denudatum; 4757, 4921, 4922, koelzii; 18164, lanigerum; 12713, minjanense; 18015, pallidiflorum; 9313, pyramidale; 9261, roylei; 25579, 31250, stapeliosum; 18519, syncarpum; 13725, 13853, 14100, tetanoplectrum; 18110a, tuberosum; 3077, 21952, vestitum

Kolenati 1590, D. ochroleucum

Komarov, V. L. 6-26-93, D. biternatum; 7-18-1908, 3896, D. brachycentrum; 6-26-92, dasyanthum; 670, grandiflorum; 671, maackianum

Korolkov 76, D. dasyanthum Korshinsky 80, D. karateginii Koslov, 240, D. grandiflorum Kotschy 239, 239b, D. aquilegifolium; 153, 393a, 400, May 1842, cyphoplectrum; 427, 503, kurdicum; 430, lanigerum; 754, longebracteatum; 410, 610, micranthum; 1, 8-1-41, peregrinum; 536, saniculifolium; 227, virgatum

Krause, K. 4109, D. peregrinum
Kronenburg 166, D. pallidiflorum
Kuan, K. C. 2290, D. tianshanicum
Kuschakewicz 7-22-78, D. dasyanthum
Kusnezow 875, 885, D. elatum

Lace, J. H. 3862, D. centeteroides; 164, 734, 1523, 1924, D. denudatum; 6012, lacei; 2094, lacostei; 467, 850, roylei; 3326, 3351, uncinatum

Lacoste 11, D. molle
Ladygin, Oct. 1900, D. trichophorum
Lamont, J. 1065, D. anthriscifolium
Lance 18, D. brunonianum: 21, cash-

Lance 18, D. brunonianum; 21, cashmerianum

Ledebour 809, D. grandistorum
Legendre 1563, D. lancisepalum
Lepcha 269, D. caeruleum; 865, micropetalum

Li, C. F. 10707, D. grandiflorum

Li, H. 74095, D. campylocentrum;

78175, lancisepalum; 78358, pseudocampylocentrum; 74016, pseudograndiflorum; 74723, souliei; 78699,
trichophorum

Li, K. F. 63169, D. trifoliolatum
Li & Chu 7003, D. tianshanicum
Licent, R. P. 1305, 1999, 7665, D.
grandiflorum; 2760, 4544, henryi;
4279, 7719, polyanthum; 4686, pulcherrimum; 5655, siwanense

Ling, K. 9143, D. grandiflorum Liou, K. M. 1405, D. grandiflorum; 5093, henryi

Liou, T. N. & P. C. Tsoong 986, D. taipaicum

Lipschitz 685, D. batalinii; 718, minjanense

Liu, Y. 1433, 1968, 12689, D. grandiflorum

Lipsky 1685, D. batalinii; 1783, duhmbergii; 8-10-1896, propinquum; 1887, semiclavatum; 3070, 5-8-1912, turkmemum Litchfield in 1890, D. densiflorum Litwinow 490, 989, D. grandiflorum; 2026, 3013, maackianum; 443, 444, semibarbatum; 447, 448, turkmemum

Loftus 5-3-1852, D. cyphoplectrum Lomakin in 1895, D. foetidum

Lowndes, D. 1283, 1323, D. brunonianum; 1229, 1324, kamaonense; 1347, 1505, nepalense

Ludlow, F. 433, 838, D. brunonianum; 332, candelabrum; 864, cashmerianum; 775, 781, kamaonense; 762, poltaratzkii; 48, psuedograndiflo-

rum; 868, roylei

Ludlow & Sherriff 1987, acuminatissimum; 523, 6899, D. albocaeruleum; 298, 3496, 3558, altissimum; 1995, 6912, 8504, 8930, 8561, 9010, 9925, brunonianum; 873, 887, 1016, 19686, bhutanicum; 779, 1968, 1977, 2400, 9751, 9952, 11067, caeruleum; 1881, 2814, 7914, cashmerianum; 523, candelabrum; 3519, 17065, 19578, cooperi; 7671, 8106, 9106, denudatum; 16786, 17128, 19724, glaciale; 9073, 9814, 11114, grandiflorum; 154, 528, 2421, 2461, 1942, 8781, 8789, 2777, 9893, 11108, gyalanum; 2424, hillcoatiae; 527, 855, kingianum; 894, 470, 368, 1008, 16972, 19485, 20978, 21303, ludlowii; 3537, muscosum; 17128, 19724, nepalense; 687, 499, 2595, pseudograndiflorum; 1958, 1977, pulcherrimum; 1534, pyramidale; 7560, 8213, 8238, 9376, roylei; 219, 3342, scabriflorum; 5833, sherriffii; 474, 2563, 2096, 2721, 864, 2515, 9958, 10069, 17151, 19702, 19770, 19787, 21057, viscosum

Ludlow, Sherriff & Elliot 15683, D.

pseudograndiflorum

Ludlow Sherriff & Hicks

Ludlow, Sherriff & Hicks 17476, D. caeruleum; 16825, 17102, 19328, 19375, 19399, 19725, muscosum

Ludlow, Sherriff & Taylor 6921, D. albocaeruleum; 6379, beesianum; 5329, 5329A, 5824, 5701, 6250, 4849, gyalanum; 5397, 6920, muliense; 5162, 6093, 13920, pseudograndiflorum; 6066, 6403, viscosum Ludlow, Stainton & Williams 15621, D. likiangense

Lyon, Bowes 25, D. aquilegifolium; 1083, brunonianum

Maack, R. 673, D. cheilanthum Macmillan, H. F. 7, 8, 9, D. tuberosum

Maire, E. E. 2292, 3292, 6367, 7419, D. delavayi; 2128, D. georgei; 2669, mairei; 7437, mosoynense; 284/1914, pogonanthum; 208, 380, 720, 2675, tatsienense; 2127, 7437, tenii; 2962, trichophorum; 389, 1196, yunnanense

Mamlev 211, D. elatum

Manissadjian 675, D. fissum ssp. anatolicum; 26, peregrinum

Martin & Bodinier 1789, D. yunnanense

Matveeva, E. 555, D. laxiusculum

Maydell, G. 8-8-1869, D. brachycentrum

McLarens collectors 159, D. bulleyanum; 171, beesianum; N-180, ceratophorum; N71, N132, N175, L131,
delavayi; 165, mosoynense; N165,
pycnocentrum; AC266, spirocentrum; AC295, souliei; AC193,
AC201, AC275, B264, B213, V91,
tatsienense; 206, 258, tongolense;
AB79, F68, V88, yunnanense

McNeill, 731, D. crispulum

Melville, 43, D. burmaense

Merton 3935, D. quercetorum; 3888, semibarbatum

Merzbacher 723, D. duhmbergii; 1304, villosum

Metcalf & Chang 797, D. anthriscifolium

Metz 52, D. vestitum

Meyer, C. A. 1727, D. caucasicum

Meyer, F. N. 1057, D. grandiflorum; 626, semibarbatum; 552, turkme-mum

Meyer, F. S. B4864, D. ithaburense; 99, virgatum

Mikelson, A. 2279, D. biternatum

Mozheeba 239, D. elatum

Mussot (Moussot) 27, D. souliei; 28, 29, trichophorum

Nasir, E. 28459, D. centeteroides Nath, M. 387, 437, D. vestitum Nevski, S. 790, D. ternatum Ngan, Han 92, D. grandiflorum Norton, J. 369, D. nortonii

Ohwi, J. 10662, D. grandiflorum; 2808, maackianum Osmaston 75, D. roylei

Parmanand, N. 588a, D. brunonianum; 1139a, vestitum Pavillon 1843, D. formosum

Pavlov 336, D. dissectum

Pei 2646, D. anthriscifolium var. calleryi

Persnin 170, D. cinereum

Pichler in 1882, D. tuberosum

Pinard in 1843, D. cinereum

Pinfold 164, D. denudatum; 329, pyramidale; 210, 224, roylei

Polunin, O. 2599, 6250, D. brunonianum; 56/175, 56/597, 56/647, cashmerianum; 1440, 1247, densiflorum; 1905, 1790, 1949, glaciale; 555, 1413, 1489, 1778, himalayae; 872, 1576, kamaonense; 6208, lacostei; 56/699, pyramidale; 56/330, 56/602, roylei; 56/283, 56/803, vestitum

Polunin, Sykes & Williams 3518, D. cooperi; 264, 2503, 4885, 5128, 5290, himalayae; 3533, nepalense; 2629, 5120, pyramidale; 386, 5025, 5441, vestitum; 1907, 3916, williamsii

Popov 259, D. biternatum

Post 5-20-71, 6-30-82, 8-22-84, D. peregrinum

Potanin in 1885, D. orthocentrum, pylzowii and sutchuenense

Prance & Ratcliffe 159, 265, D. peregrinum

Pratt 462, D. pachycentrum; 344, potaninii

Prokhanov 43, D. macropogon

Przewalski in 1872, D. albocaeruleum, pylzowii and sparsiflorum; in 1873 and 1874, przewalskii; in 1880, pylzowii and trichophorum

Ptazycki 373, D. elatum

Purdom 126, D. grandiflorum; 142, trichophorum

Radde, G. 212, D. crispulum; 545, semibarbatum

Rajkova 129, D. dasyanthum

Ram Bahsli 14811, D. suave Ram Bahsh or Bakeh 8351, D. cashmerianum; 4342, 4344, roylei

Rami, Hoshen & Nuri 29481, D. macrostachyum

Ratcliffe 759, D. venulosum

Rawi, 24731, D. micranthum; 12213, pallidiflorum; 22200, 22706, 23431, quercetorum

Rawi & Serhang 20208, D. foetidum

Read 746, D. grandiflorum

Rechinger 3838, D. aquilegifolium; 1416, biternatum; 6093a, elbursense; 6191, gorganicum; 3364, saniculifolium; 1698, 4934, semibarbatum; 6083, ursinum

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#### ADDENDUM

Chienia honanensis W. T. Wang. Dr. Lothar Benzing of the Institut für Allgemeine Botanik at Mainz, West Germany, has very kindly called my attention to, and sent me a xeroxed copy of an article in Acta Phytotaxonomica Sinica 9: 104–107. pls. VI, VII. 1964, in which W. T. Wang proposed a new genus Chienia, closely related to Consolida and Delphinium. As the Royal Botanic Garden at Edinburgh had received photographs, and even isotypes, of many of Wang's earlier species of Delphinium, I asked Dr. Peter Davis whether they had any material of the Chienia, but word has just come that he and Mr. Lauener have none.

Wang's excellent illustration of Chienia honanensis W. T. Wang and the detailed Latin descriptions of the genus and species certainly suggest Delphinium grandiflorum L. in habit, vesture, leaf dissection, flower color, and size. The